

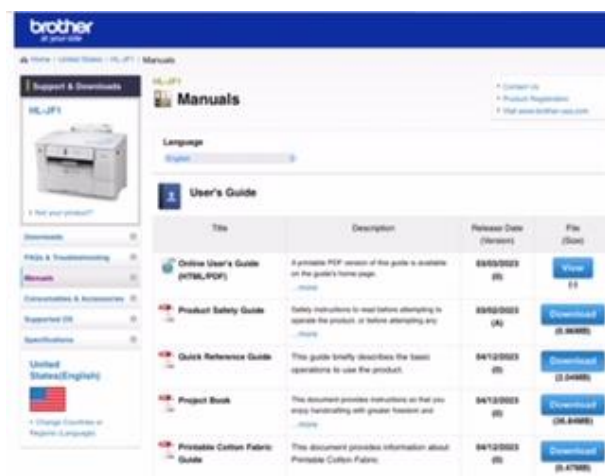
## Get Started Printing Fabric

The PrintModa Fabric Studio printer (HLJF1) is a traditional wireless printer and a fabric printer. Paper is printed using the top tray (Tray One) and fabric is printed on a special roll of fabric installed in the bottom tray (Tray two). The fabric roll is 100% cotton fabric specially treated to receive ink and has a removable plastic backing to keep it smooth and rigid during printing. The printer comes with a sample roll of printable fabric (11.6" x 1.4 yards ) and sample ink cartridges (Black Inkjet ink - LC406BKS, Cyan Inkjet ink - LC406CS, Magenta Inkjet ink - LC406MS, and Yellow Inkjet ink - LC406YS). The cartridges contain pigment-based ink specially formulated for fabric printing. See addendum below for more information on the ink.

The Quick Support Guide should be in the box. (To access a digital copy or if it is lost "somewhere in the house", go to the Brother USA Support website for the printer and select "Manuals". The Quick Reference guide and other support documents are available



[www.brother-usa.com/support](http://www.brother-usa.com/support)  
(Self-Service/Email/Chat)  
1-877-BROTHER  
(1-877-276-8437)



for download.) An interactive online User's Guide is available on the Manuals support page. You can print the User's Guide as a reference. Yes, you can print the manual to know how to use the new printer. (Not kidding.)



Send print files to the printer via the Artspira app or computer or with a cable or USB drive. When getting started the simplest way to get quick results is with the Artspira app. Download the free app to a mobile device such as a phone or tablet. Use the QR code to find the app on your mobile device. On the screen of the printer, touch the Wireless icon on the bottom of the screen to connect the printer to a wireless network. Both the mobile device and the printer need to be on the same network. Create an

Artspira account and look in the upper right corner to find instructions to connect the app to the printer. See more on creating a print file from the Artspira app see *“Printing from the Artspira App”* below.

Connect the printer to a computer by installing the printer driver from the Brother Support website. All printers need a “driver” to send information to the printer. A driver is a piece of software to help your computer communicate with your printer or other connected devices. The driver also monitors the printer's status. To find the webpage to download and install the driver, type in “[brother-usa.com/support/hljf1](http://brother-usa.com/support/hljf1)”. Select “Downloads & Drivers” and follow the instructions. You will need to know the Operating System (OS) of your computer to select the correct driver for your personal computer. The Brother website also has instructions for installing a driver or ask any Millennial to do it for you. Your computer can have drivers for multiple printers.

After selecting “Print” in any program on the computer, select the desired printer from the menu of available printers in a drop-down menu. See more on creating a print file in a computer program below. For those without a wireless home network or temporary loss of internet access, a print file can also be sent to the printer with a direct connect computer cable or USB. See the online User's Guide for directions on directly connecting and using the USB for printing (see kind of a good idea to print at least that part of the User's Guide, huh?). Check the remaining amount of Fabric Roll before printing. If there is not enough Fabric Roll for the page length you want to print, the machine may stop printing in the middle of the print job. Even if the remaining amount of Roll paper is

enough to fit your print job, the machine may leave a blank space at the bottom of the printout.

### *Information on the Brother LC406 INK from the Brother Website*

The Brother LC406 ink cartridges used by the Brother PrintModa Fabric Printer are high-quality pigment-based inks specifically designed for fabric printing. These inks typically provide better color stability and resistance to fading compared to some dye-based inks.

Some inkjet printers use dye-based ink; some use pigment-based ink. Dye ink uses color substances dissolved in a liquid, while pigment ink uses small color particles held in a suspension. The water-soluble dye can be seen as sugar that dissolves in water, and the pigments as sand mixed in water.

The initial print quality between dye and pigment ink is virtually the same. Both the vibrancy and color reproduction look very similar. It is hard to tell the difference between dye and pigment ink when comparing quality looking side by side. Dye-based inks are able to provide a wider color space for more vibrant and colorful prints but will come off when getting in contact with water unless printed on specially coated material. Pigment inks tend to be lighter in color than dye. They are more water-resistant while producing a truer solid black than dye. Pigment ink holds its color, quality, and vibrancy better than dye.

### *Advice for Caring for Fabric Printed with Pigment-based Ink from the Brother Website*

After printing the fabric, allow it to dry for about 10 minutes. Soak and hand wash it for about 10 minutes with enough water to submerge it. Carefully shake off the water, and then lay it flat to air-dry. DO NOT wring to remove excess water.

After washing and drying, use heat to fix the ink onto the fabric. This can be done through a heat press or by ironing the printed fabric with low to medium heat. The heat helps set the ink and improves its resistance to fading.

Future washes (if needed): When washing printed fabric, follow the care instructions carefully. Use a mild detergent, and avoid harsh chemicals that may degrade the ink. If

possible, turn the fabric inside out before washing to reduce friction on the printed surface.

**Avoid Sun Exposure:** Minimize exposure to direct sunlight, as UV rays can contribute to fading. If possible, display or store your printed fabrics away from windows or use UV-protective coatings or treatments.

**Store Properly:** Store printed fabrics in a cool, dry place to prevent environmental factors from affecting the ink. Avoid exposing them to extreme temperatures or humidity.

**Protect from Abrasion:** Handle printed fabrics with care to minimize abrasion, which can wear down the printed surface over time. Avoid folding or stacking prints in a way that causes friction between them.

How do I know if my printer ink is pigment or dye? If you put a drop of ink on plain paper (not photo paper) and let it dry, dye ink will wash off almost completely if you submerge the paper in water, where pigment ink will retain most of its color.

Good to know that if the ink cartridges have reached the end of their lives when you are printing on Fabric Roll, you can replace them with new ink cartridges of the same color and continue printing. The color tone may be different after the ink cartridge replacement.

### *Printing from the Artspira App*

The wireless Artspira app is the simplest method for printing and is perfect for your first project. This app connects not only to Printmoda, but also to Brother's wireless Embroidery Machines, wireless Scan N Cut cutting machines and wireless sublimation printers. The app has a lot of free images (and embroidery designs and cutting designs and sublimation designs and project ideas) for printing with new ones added every month. A monthly subscription service is available with many, many more images (and embroidery designs and cutting designs and project ideas). The subscription service **is not required** to use the Printmoda printer from the Artspira app. The available print images are visible on the home page of the app.

To create and print a project from the Artspira app, open the app and log in. Select Printing Designs from the top of the page to look through the designs dedicated to printing in categories. Select a Design or "+ New" then "Printing" to start a new design.

Select “Design Editor” to create a printing project from images in the app or your own photos. Select “Geometric Patterns” to create an overall kaleidoscope-like design from patterns or your photos. After selecting an option, select a page size. The page size can be changed at any time during the design process. Choose “Custom Size” to create a print up to 51.18”” long. Templates are available to make creating a project easy.

On the bottom of the new project page, three options are available. Create an overall pattern or field of color with the first icon on the left. Use the Plus icon in the middle to add images from the Camera Roll on your mobile device or Printing Data within the app. Choose the “Aa” icon to add text. Stylized text for specific phrases is available under the “Logo” option in Printing Data. After choosing Camera Roll, take a picture with your mobile device built in camera (such as a non-digital photo) or select the “+” in the upper right to add photos to the available images. Transfer an image to your mobile device from the computer to use it in Artspira. A simple way to transfer an image (like from a Windows computer to an Apple iPad) is to email the image to yourself and save the image from the email on the mobile device.

Choose a photo by touching it to place it on the page. Touch the photo on the workspace to select it and a thin blue line appears around the photo. Biometric touch screen controls on the mobile device work on the selected image. For example, using two fingers touch and move the fingers apart or together to change the size or rotate. A menu of edit controls is available on the bottom of the screen when an image is selected. The Size edit changes the image either proportionally or dis-proportionally by unlocking the Padlock icon. The size changes + or - one click at a time. (Super-duper slow.) Change the image using touch controls first, then refine the size using the Size edit function. Portrait Conversion to modify an image to simple lines is currently only available with an Artspira+ subscription. An image can also be modified using built in apps on your mobile device. A variety of included, free and paid apps are available for any mobile device. See *Information on Editing a Photo for Printing from the Brother Website* below for information on editing a photo for optimum printing results. To modify an image that has already been selected and is on the Artspira workspace, minimize the app. Edit the photo and save the changes in the Photo Album on your device. If the changes were applied to the photo chosen from the Photo Album, the changes will automatically appear in the image on the Artspira app. (So very cool!)

## *Information on Editing a Photo for Printing from the Brother Website*

Editing a photo for high-quality printing on fabric involves several considerations to ensure the best results. I understand that many of you don't own expensive photo editing software so some of these suggestions won't work for you. Here are some steps you can follow:

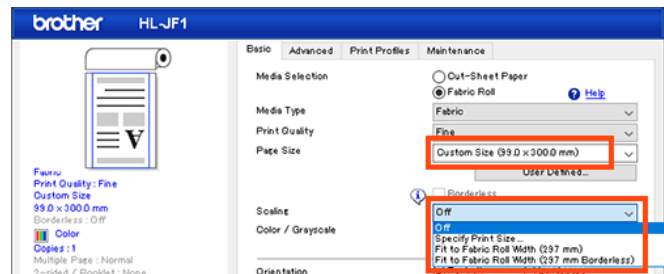
- **Start with a High-Resolution Image:** Use a high-resolution photo to begin with. Higher resolution images contain more details and will result in a sharper print.
- **Choose the Right Color Mode:** Ensure your image is in the CMYK color mode. This is the color mode used for printing, and it's different from RGB, which is used for digital displays.
- **Adjust Image Size and Resolution:** Set the image size to the actual dimensions you want it to be printed on the fabric. Also, set the resolution to a minimum of 300 pixels per inch (PPI) for high-quality printing.
- **Correct Color Balance and Saturation:** Adjust the color balance and saturation to ensure accurate and vibrant colors. This is important because the way colors appear on a screen might differ from how they'll look in print.
- **Sharpening:** Apply appropriate sharpening to enhance the details, but be cautious not to over-sharpen, as it can create artifacts.
- **Noise Reduction:** Check for and reduce any digital noise in the image. Noise can be more noticeable in print than on a screen.
- **Use Adjustment Layers:** Utilize adjustment layers in your photo editing software. This allows you to make non-destructive changes, preserving the original image.
- **Check for Distortions:** Make sure the image doesn't have any distortions or pixelation. Correct any distortions that may occur during resizing.
- **Save in the Right Format:** Save your edited image in a format that supports high-quality printing, such as TIFF or PNG. Avoid using lossy compression formats like JPEG, especially for intermediate saves.
- **Soft Proofing:** Use soft proofing features in your photo editing software to simulate how the image will look when printed. This can help you identify and correct any issues before sending it to print.
- **Print a Test:** Before printing the final version, consider printing a small test on the same fabric material to check for any unexpected issues and ensure the colors and details meet your expectations.

## Printing from a Computer Program

There are all kinds of reasons to print directly from a computer. Perhaps the biggest reason is a larger screen and using a mouse to edit the image. Another huge reason is the availability of powerful image creating and editing programs. (Ask any graphic designer.) The Brother Support website has step-by-step instructions for printing from different computer programs. The instructions for creating a document and printing from Microsoft Word are below because I am more familiar with that program. This handout is pretty, right?

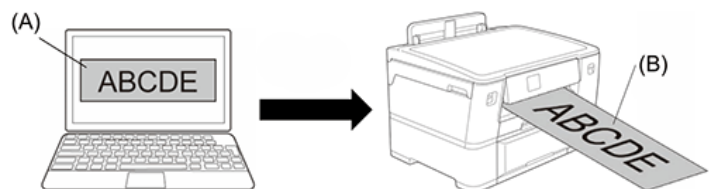
Printing from a computer program rather than from the Artspira app requires **a little more user interaction**. The Artspira app is designed specifically for the Printmoda printer so it does a lot of the setup for printing for you. Instructions from the Brother website for setting up printing in the printer pop up instruction window are included here in edited nonprofessional, non-engineer words, but check the actual website for instructions in “Engineer Speak”. (Bless the sewing engineers for they give us all this cool tech.)

After selecting Print in the computer program of your choice and the HL-JF1 printer, a pop up window appears for the set up of the printer. (A similar window appears for **any** printer. This window has specific instructions for that printer and your print file.) It’s important to know what the little boxes are referring to.



**Page Size** is the size you set for your print file in the application you want to print use to create your and print. For example, you selected Letter Size (8 ½” x 11”) or Legal Size (8 ½” x 17”). Selecting page size for your print file (document) lets the program know when to spill the content to a new page because it is too much for one page. See illustration below (A).

**Print Size** is the size you want to print the document. For example, a document can be printed larger or smaller. To save paper



you can print a lot of pages in Booklet form that has multiple pages on one sheet of paper. The printing is really, really small but that is what bifocals are for. (Besides use less paper and you helped save a tree. The Earth says “Thanks”!). See illustration above (B).

Depending on the application you are using, there may be limitations on the **page size** you can choose. For example, I am writing this handout in an older version of Microsoft Word and it only lets me choose a custom page width of 22” and custom page length of 22”. That is not exactly banner or yardage length for fabric printing. So we will play by the program’s rules for creating a print file (document in Microsoft Word) and printing it bigger. Just because we can.

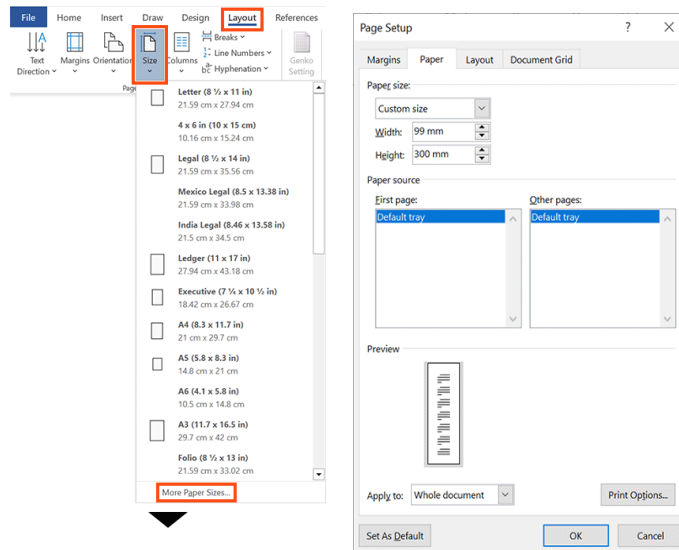
The engineers say:

*“For larger size printouts, such as banners, create a smaller page size in your application and then enlarge it when printing using the Scaling option in the printer driver. Example : for a printout with the width of 297 mm and the height of 900 mm, create a page with the width of 99 mm and the height of 300 mm in the application you are using. The page size specified in your application in this example is three times smaller than the print size, but you can enlarge the page size when printing.”*

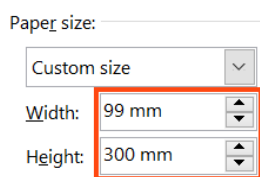
So what does that mean? Well first of all, the Printer (and just about all of the rest of the world) measures things in the metric system. If you are wondering why the width of the fabric roll is an odd Imperial measurement (11.69”), it’s because it is really 297 mm. Which is really still an odd number, but at least it is not in a fraction. (So to make things easy, get over it and use mm in the metric system to set the size of the document.) I am comfortable in Microsoft Word. I will use that program as an example. Let’s create a single page that works for the width of the fabric roll in the Printmoda printer and then we will make a super big printout using scaling.



In Microsoft Word, create a new document that when printed fits on the Scan N Cut 12" square mat (about 11.69" x 11.69"). Choose Layout/Size/More Paper Sizes in the ribbon menu. Enter a custom size width and length of 11.69" or 297mm. The document will automatically change to a larger, wider page. Use the Insert option to create your print file (document). There are many options for inserting an image: clip art, shapes, drawing under shapes, smart art, word art, symbols or charts into the document. When an object is selected, there are many editing features to control the look of the graphics. I found that the computer program supported more images on a page than Artspira did. Choose an Orientation for the Page; Portrait or Landscape. Even though this page is square, select the same orientation when printing. To **simply** create a larger "page" enter up to 22" in **this** program. Of course, a different program will have different options and may support much larger dimensions for large format printers.



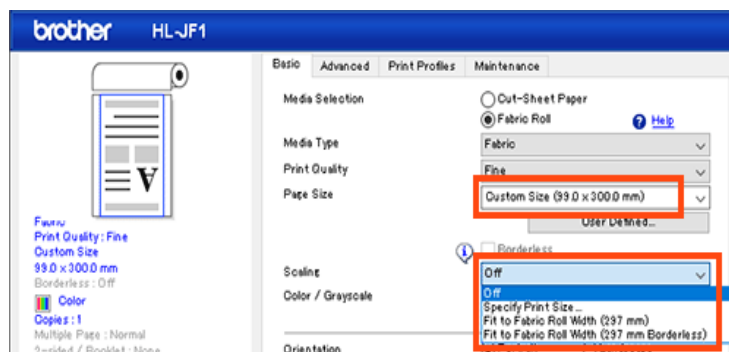
## Printing a Large Page from Microsoft Word



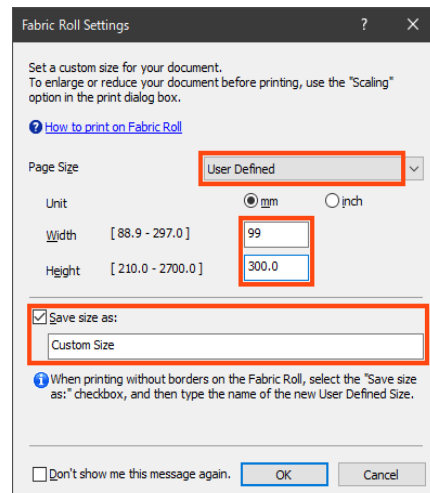
To create a printout that is larger than the maximum size page in your program create a page size that is smaller and then tell the printer to print the page in a percentage larger than the page. For example, to print a "page" the width of the fabric roll 11.69" (297mm) wide and

35.43" (900mm) long, create a document that is **one-third** the size and tell the printer to print it **three times** larger. Enlarge the page size when printing to 297mm width and height of 900 mm. Therefore, choose "Fit to Fabric Roll Width (297mm)" in Scaling. Or use the Artspira app, just saying.

After selecting print in the program, follow these steps to print your documents on the Fabric Roll. You must install the Brother HL-



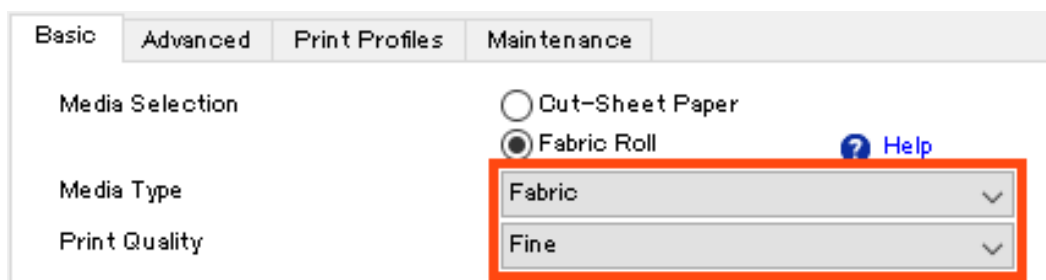
JF1 driver software on your computer if you want to print on the Fabric Roll. Make sure you have loaded Fabric Roll in Tray #2. Select your model's name, and then click the printer's properties or preferences button. The printer driver window and "Fabric Roll Settings tab" appear. In "Fabric Roll Settings tab" enter the size of the created document.



Click the "Page Size" drop-down list, and then select "User Defined". Type the width and height of the page created in your application or if the page size created in your application is not the same as the actual print size, type the page size.

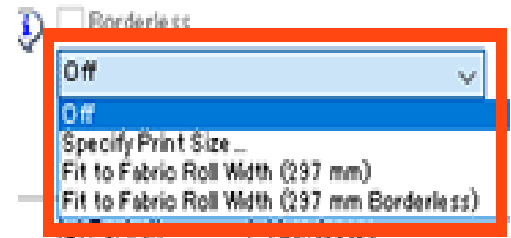
Select the "Save size as:" checkbox, and then type the size name you want to use. This step is essential when printing without borders on Fabric Roll. Finally, click "OK" to apply your page size settings and close the window. In the Page Orientation section, select the Portrait or Landscape option to set the orientation of your printout. If your application contains a similar setting, choose the same one here.

In the Media Type drop-down list, select "Fabric" and the Print Quality. The choices for Print Quality are Fine and Eco Mode. I have had good results using the Eco Mode, but test to see what works best for your project. To get the best print quality for the settings you have selected, always set the Media Type option to match the type of paper you load.



Make sure the correct page size is selected in the Page Size field, then click the Scaling drop-down list, and then select the option to enlarge or reduce the page size, if needed. There are four options in the Scaling Drop Down list. What do they mean?

**Off** - Select this option to print your document without enlarging or reducing its page size.



**Specify Print Size** - Select this option to enlarge or reduce the page size to fit on the specified print size.

**Fit to Fabric Roll Width (297mm)** - Select this option to enlarge or reduce the page size to fit the width of the Fabric Roll.

**Fit to Fabric Roll Width (297mm Borderless)** - Select this option to enlarge or reduce the page size to fit the width of the Fabric Roll and print without borders.

#### Load the Fabric Roll in Tray #2

- 1 If the paper support flap (1) is open, close it, and then close the paper support (2).



- 2 Pull Tray #2 completely out of the machine as shown by the arrow.



#### NOTE

- Remove any A4 or Letter size paper from Tray #2, before loading the Fabric Roll. DO NOT use any size paper and a Fabric Roll at the same time.

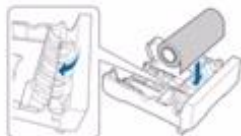
- 3 Carefully press and slide the paper width guides (1) to extend the tray to the maximum width.



- 4 Open the switch flap as shown to set the tray to the Roll media mode.



- 5 With the fabric side of the Fabric Roll facing down, feed the end into the slot in the tray.



#### NOTE

- Press only on the fabric side of the Fabric Roll. Pressing on the backing film may damage the machine.
- If the end of the fabric is fraying, use scissors to cut off any excess threads before loading the Fabric Roll.
- If there is slack in the Fabric Roll, wind it more tightly before loading it.

- 6 Using both fingers supporting the sides of the Fabric Roll, rotate the Fabric Roll as shown by the arrow. Continue rotating the Fabric Roll until the leading edge reaches through the paper slot in the base of the tray and touches the far edge (1) of the tray.



- 7 Carefully adjust the paper width guides (1) to fit the fabric. Make sure the paper guides touch the edges of the fabric.



- 8 Slowly push Tray #2 completely into the machine.



#### IMPORTANT

- DO NOT push the tray into the machine forcefully or quickly. Doing this may cause material jams or material feed problems.

- 9 Make sure that the paper support is closed.



#### IMPORTANT

- To avoid damaging the printed material, DO NOT pull out the paper support when loading the Fabric Roll.
- If you pull Tray #2 out of the machine after loading the Fabric Roll, the Fabric Roll tray comes loose or the leading edge may shift from the loaded position. To avoid damaging the material and causing feed problems, correctly load the Fabric Roll again.

- When Tray #2 is loaded with a Fabric Roll and you print on fabric, the machine will feed finished jobs as the fabric does not feed. After printing, wait until cutting is complete, and then remove the printed fabric and press (1) on the machine's LCD.

#### Specifying the paper size and paper type to print on the Fabric Roll

- 1 Press (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100) (101) (102) (103) (104) (105) (106) (107) (108) (109) (110) (111) (112) (113) (114) (115) (116) (117) (118) (119) (120) (121) (122) (123) (124) (125) (126) (127) (128) (129) (130) (131) (132) (133) (134) (135) (136) (137) (138) (139) (140) (141) (142) (143) (144) (145) (146) (147) (148) (149) (150) (151) (152) (153) (154) (155) (156) (157) (158) (159) (160) (161) (162) (163) (164) (165) (166) (167) (168) (169) (170) (171) (172) (173) (174) (175) (176) (177) (178) (179) (180) (181) (182) (183) (184) (185) (186) (187) (188) (189) (190) (191) (192) (193) (194) (195) (196) (197) (198) (199) (200) (201) (202) (203) (204) (205) (206) (207) (208) (209) (210) (211) (212) (213) (214) (215) (216) (217) (218) (219) (220) (221) (222) (223) (224) (225) (226) (227) (228) (229) (230) (231) (232) (233) (234) (235) (236) (237) (238) (239) (240) (241) (242) (243) (244) (245) (246) (247) (248) (249) (250) (251) (252) (253) (254) (255) (256) (257) (258) (259) (260) (261) (262) (263) (264) (265) (266) (267) (268) (269) (270) (271) (272) (273) (274) (275) (276) (277) (278) (279) (280) (281) (282) (283) (284) (285) (286) (287) (288) (289) (290) (291) (292) (293) (294) (295) (296) (297) (298) (299) (300) (301) (302) (303) (304) (305) (306) (307) (308) (309) (310) (311) (312) (313) (314) (315) (316) (317) (318) (319) (320) (321) (322) (323) (324) (325) (326) (327) (328) (329) (330) (331) (332) (333) (334) (335) (336) (337) (338) (339) (340) (341) (342) (343) (344) (345) (346) (347) (348) (349) (350) (351) (352) (353) (354) (355) (356) (357) (358) (359) (360) (361) (362) (363) (364) (365) (366) (367) (368) (369) (370) (371) (372) (373) (374) (375) (376) (377) (378) (379) (380) (381) (382) (383) (384) (385) (386) (387) (388) (389) (390) (391) (392) (393) (394) (395) (396) (397) (398) (399) (400) (401) (402) (403) (404) (405) (406) (407) (408) (409) (410) (411) (412) (413) (414) (415) (416) (417) (418) (419) (420) (421) (422) (423) (424) (425) (426) (427) (428) (429) (430) (431) (432) (433) (434) (435) (436) (437) (438) (439) (440) (441) (442) (443) (444) (445) (446) (447) (448) (449) (450) (451) (452) (453) (454) (455) (456) (457) (458) (459) (460) (461) (462) (463) (464) (465) (466) (467) (468) (469) (470) (471) (472) (473) (474) (475) (476) (477) (478) (479) (480) (481) (482) (483) (484) (485) (486) (487) (488) (489) (490) (491) (492) (493) (494) (495) (496) (497) (498) (499) (500) (501) (502) (503) (504) (505) (506) (507) (508) (509) (510) (511) (512) (513) (514) (515) (516) (517) (518) (519) (520) (521) (522) (523) (524) (525) (526) (527) (528) (529) (530) (531) (532) (533) (534) (535) (536) (537) (538) (539) (540) (541) (542) (543) (544) (545) (546) (547) (548) (549) (550) (551) (552) (553) (554) (555) (556) (557) (558) (559) (560) (561) (562) (563) (564) (565) (566) (567) (568) (569) (570) (571) (572) (573) (574) (575) (576) (577) (578) (579) (580) (581) (582) (583) (584) (585) (586) (587) (588) (589) (590) (591) (592) (593) (594) (595) (596) (597) (598) (599) (600) (601) (602) (603) (604) (605) (606) (607) (608) (609) (610) (611) (612) (613) (614) (615) (616) (617) (618) (619) (620) (621) (622) (623) (624) (625) (626) (627) (628) (629) (630) (631) (632) (633) (634) (635) (636) (637) (638) (639) (640) (641) (642) (643) (644) (645) (646) (647) (648) (649) (650) (651) (652) (653) (654) (655) (656) (657) (658) (659) (660) (661) (662) (663) (664) (665) (666) (667) (668) (669) (670) (671) (672) (673) (674) (675) (676) (677) (678) (679) (680) (681) (682) (683) (684) (685) (686) (687) (688) (689) (690) (691) (692) (693) (694) (695) (696) (697) (698) (699) (700) (701) (702) (703) (704) (705) (706) (707) (708) (709) (710) (711) (712) (713) (714) (715) (716) (717) (718) (719) (720) (721) (722) (723) (724) (725) (726) (727) (728) (729) (730) (731) (732) (733) (734) (735) (736) (737) (738) (739) (740) (741) (742) (743) (744) (745) (746) (747) (748) (749) (750) (751) (752) (753) (754) (755) (756) (757) (758) (759) (760) (761) (762) (763) (764) (765) (766) (767) (768) (769) (770) (771) (772) (773) (774) (775) (776) (777) (778) (779) (780) (781) (782) (783) (784) (785) (786) (787) (788) (789) (790) (791) (792) (793) (794) (795) (796) (797) (798) (799) (800) (801) (802) (803) (804) (805) (806) (807) (808) (809) (810) (811) (812) (813) (814) (815) (816) (817) (818) (819) (820) (821) (822) (823) (824) (825) (826) (827) (828) (829) (830) (831) (832) (833) (834) (835) (836) (837) (838) (839) (840) (841) (842) (843) (844) (845) (846) (847) (848) (849) (850) (851) (852) (853) (854) (855) (856) (857) (858) (859) (860) (861) (862) (863) (864) (865) (866) (867) (868) (869) (870) (871) (872) (873) (874) (875) (876) (877) (878) (879) (880) (881) (882) (883) (884) (885) (886) (887) (888) (889) (890) (891) (892) (893) (894) (895) (896) (897) (898) (899) (900) (901) (902) (903) (904) (905) (906) (907) (908) (909) (910) (911) (912) (913) (914) (915) (916) (917) (918) (919) (920) (921) (922) (923) (924) (925) (926) (927) (928) (929) (930) (931) (932) (933) (934) (935) (936) (937) (938) (939) (940) (941) (942) (943) (944) (945) (946) (947) (948) (949) (950) (951) (952) (953) (954) (955) (956) (957) (958) (959) (960) (961) (962) (963) (964) (965) (966) (967) (968) (969) (970) (971) (972) (973) (974) (975) (976) (977) (978) (979) (980) (981) (982) (983) (984) (985) (986) (987) (988) (989) (990) (991) (992) (993) (994) (995) (996) (997) (998) (999) (1000) (1001) (1002) (1003) (1004) (1005) (1006) (1007) (1008) (1009) (1010) (1011) (1012) (1013) (1014) (1015) (1016) (1017) (1018) (1019) (1020) (1021) (1022) (1023) (1024) (1025) (1026) (1027) (1028) (1029) (1030) (1031) (1032) (1033) (1034) (1035) (1036) (1037) (1038) (1039) (1040) (1041) (1042) (1043) (1044) (1045) (1046) (1047) (1048) (1049) (1050) (1051) (1052) (1053) (1054) (1055) (1056) (1057) (1058) (1059) (1060) (1061) (1062) (1063) (1064) (1065) (1066) (1067) (1068) (1069) (1070) (1071) (1072) (1073) (1074) (1075) (1076) (1077) (1078) (1079) (1080) (1081) (1082) (1083) (1084) (1085) (1086) (1087) (1088) (1089) (1090) (1091) (1092) (1093) (1094) (1095) (1096) (1097) (1098) (1099) (1100) (1101) (1102) (1103) (1104) (1105) (1106) (1107) (1108) (1109) (1110) (1111) (1112) (1113) (1114) (1115) (1116) (1117) (1118) (1119) (1120) (1121) (1122) (1123) (1124) (1125) (1126) (1127) (1128) (1129) (1130) (1131) (1132) (1133) (1134) (1135) (1136) (1137) (1138) (1139) (1140) (1141) (1142) (1143) (1144) (1145) (1146) (1147) (1148) (1149) (1150) (1151) (1152) (1153) (1154) (1155) (1156) (1157) (1158) (1159) (1160) (1161) (1162) (1163) (1164) (1165) (1166) (1167) (1168) (1169) (1170) (1171) (1172) (1173) (1174) (1175) (1176) (1177) (1178) (1179) (1180) (1181) (1182) (1183) (1184) (1185) (1186) (1187) (1188) (1189) (1190) (1191) (1192) (1193) (1194) (1195) (1196) (1197) (1198) (1199) (1200) (1201) (1202) (1203) (1204) (1205) (1206) (1207) (1208) (1209) (1210) (1211) (1212) (1213) (1214) (1215) (1216) (1217) (1218) (1219) (1220) (1221) (1222) (1223) (1224) (1225) (1226) (1227) (1228) (1229) (1230) (1231) (1232) (1233) (1234) (1235) (1236) (1237) (1238) (1239) (1240) (1241) (1242) (1243) (1244) (1245) (1246) (1247) (1248) (1249) (1250) (1251) (1252) (1253) (1254) (1255) (1256) (1257) (1258) (1259) (1260) (1261) (1262) (1263) (1264) (1265) (1266) (1267) (1268) (1269) (1270) (1271) (1272) (1273) (1274) (1275) (1276) (1277) (1278) (1279) (1280) (1281) (1282) (1283) (1284) (1285) (1286) (1287) (1288) (1289) (1290) (1291) (1292) (1293) (1294) (1295) (1296) (1297) (1298) (1299) (1300) (1301) (1302) (1303) (1304) (1305) (1306) (1307) (1308) (1309) (1310) (1311) (1312) (1313) (1314) (1315) (1316) (1317) (1318) (1319) (1320) (1321) (1322) (1323) (1324) (1325) (1326) (1327) (1328) (1329) (1330) (1331) (1332) (1333) (1334) (1335) (1336) (1337) (1338) (1339) (1340) (1341) (1342) (1343) (1344) (1345) (1346) (1347) (1348) (1349) (1350) (1351) (1352) (1353) (1354) (1355) (1356) (1357) (1358) (1359) (1360) (1361) (1362) (1363) (1364) (1365) (1366) (1367) (1368) (1369) (1370) (1371) (1372) (1373) (1374) (1375) (1376) (1377) (1378) (1379) (1380) (1381) (1382) (1383) (1384) (1385) (1386) (1387) (1388) (1389) (1390) (1391) (1392) (1393) (1394) (1395) (1396) (1397) (1398) (1399) (1400) (1401) (1402) (1403) (1404) (1405) (1406) (1407) (1408) (1409) (1410) (1411) (1412) (1413) (1414) (1415) (1416) (1417) (1418) (1419) (1420) (1421) (1422) (1423) (1424) (1425) (1426) (1427) (1428) (1429) (1430) (1431) (1432) (1433) (1434) (1435) (1436) (1437) (1438) (1439) (1440) (1441) (1442) (1443) (1444) (1445) (1446) (1447) (1448) (1449) (1450) (1451) (1452) (1453) (1454) (1455) (1456) (1457) (1458) (1459) (1460) (1461) (1462) (1463) (1464) (1465) (1466) (1467) (1468) (1469) (1470) (1471) (1472) (1473) (1474) (1475) (1476) (1477) (1478) (1479) (1480) (1481) (1482) (1483) (1484) (1485) (1486) (1487) (1488) (1489) (1490) (1491) (1492) (1493) (1494) (1495) (1496) (1497) (1498) (1499) (1500) (1501) (1502) (1503) (1504) (1505) (1506) (1507) (1508) (1509) (1510) (1511) (1512) (1513) (1514) (1515) (1516) (1517) (1518) (1519) (1520) (1521) (1522) (1523) (1524) (1525) (1526) (1527) (1528) (1529) (1530) (1531) (1532) (1533) (1534) (1535) (1536) (1537) (1538) (1539) (1540) (1541) (1542) (1543) (1544) (1545) (1546) (1547) (1548) (1549) (1550) (1551) (1552) (1553) (1554) (1555) (1556) (1557) (1558) (1559) (1560) (1561) (1562) (1563) (1564) (1565) (1566) (1567) (1568) (1569) (1570) (1571) (1572) (1573) (1574) (1575) (1576) (1577) (1578) (1579) (1580) (1581) (1582) (1583) (1584) (1585) (1586) (1587) (1588) (1589) (1590) (1591) (1592) (1593) (1594) (1595) (1596) (1597) (1598) (1599) (1600) (1601) (1602) (1603) (1604) (1605) (1606) (1607) (1608) (1609) (1610) (1611) (1612) (1613) (1614) (1615) (1616) (1617) (1618) (1619) (1620) (1621) (1622) (1623) (1624) (1625) (1626) (1627) (1628) (1629) (1630) (1631) (1632) (1633) (1634) (1635) (1636) (1637) (1638) (1639) (1640) (1641) (1642) (1643) (1644) (1645) (1646) (1647) (1648) (1649) (1650) (1651) (1652) (1653) (1654) (1655) (1656) (1657) (1658) (1659) (1660) (1661) (1662) (1663) (1664) (1665) (1666) (1667) (1668) (1669) (1670) (1671) (1672) (1673) (1674) (1675) (1676) (1677) (1678) (1679) (1680) (1681) (1682) (1683) (1684) (1685) (1686) (1687) (1688) (1689) (1690) (1691) (1692) (1693) (1694) (1695) (1696) (1697) (1698) (1699) (1700) (1701) (1702) (1703) (1704) (1705) (1706) (1707) (1708) (1709) (1710) (1711) (1712) (1713) (1714) (1715) (1716) (1717) (1718) (1719) (1720) (1721) (1722) (1723) (1724) (1725) (1726) (1727) (1728) (1729) (1730) (1731) (1732) (1733) (1734) (1735) (1736) (1737) (1738) (1739) (1740) (1741) (1742) (1743) (1744) (1745) (1746) (1747) (1748) (1749) (1750) (1751) (1752) (1753) (1754) (1755) (1756) (1757) (1758) (1759) (1760) (1761) (1762) (1763) (1764) (1765) (1766) (1767) (1768) (1769) (1770) (1771) (1772) (1773) (1774) (1775) (1776) (1777) (1778) (1779) (1780) (1781) (1782) (1783) (1784) (1785) (1786) (1787) (1788) (1789) (1790) (1791) (1792) (1793) (1794) (1795) (1796) (1797) (1798) (1799) (1800) (1801) (1802) (1803) (1804) (1805) (1806) (1807) (1808) (1809) (1810) (1811) (1812) (1813) (1814) (1815) (1816) (1817) (1818) (1819) (1820) (1821) (1822) (1823) (1824) (1825) (1826) (1827) (1828) (1829) (1830) (1831) (1832) (1833) (1834) (1835) (1836) (1837) (1838) (1839) (1840) (1841) (1842) (1843) (1844) (1845) (1846) (1847) (1848) (1849) (1850) (1851) (1852) (1853) (1854) (1855) (1856) (1857) (1858) (1859) (1860) (1861) (1862) (1863) (1864) (1865) (1866) (1867) (1868) (1869) (1870) (1871) (1872) (1873) (1874) (1875) (1876) (1877) (1878) (1879) (1880) (1881) (1882) (1883) (1884) (1885) (1886) (1887) (1888) (1889) (1890) (1891) (1892) (1893) (1894) (1895) (1896) (1897) (1898) (1899) (1900) (1901) (1902) (1903) (1904) (1905) (190